

1 illustrated by a ship's gyroscopic-compass. A ship's gyro-compass may be set,
2 at the start of a voyage, to point North, but, as the ship's sails North or South, the
3 master gyro-compass will, in the absence of constant adjustment, ultimately be
4 seen to point straight up and down. It senses no outside forces such as gravity
5 or magnetism. In contrast to this, gravity-sensing tilt-sensors, such as bubble
6 levels or plumb-bobs would consistently define "up" and "down" accurately
7 throughout a voyage (and a magnetic compass would consistently define North
8 and South).

9
10 (Para. 9) All this illustrates the distinction between a gyroscope which is
11 influenced by no external forces, and a gravity-sensing tilt-sensor that is
12 influenced by gravity. As pointed out, above, the previous Richter patent uses
13 gyroscopic reference, and the instant application references one or more gravity-
14 sensing tilt-sensor(s). Thus the two are distinct at their very foundations.

15
16 (Para. 10) The applicants respectfully assert that this distinction, clarified in the
17 above amended claims, negates examiner's paragraph 6 grounds for §102(e)
18 rejection due to anticipation by Richter (US 6,715,213 B2) of independent claims
19 1 and 2, and by implication, the associated dependent claims, in that they
20 incorporate all subject matter of claims 1 and 2 and add additional subject matter.
21 This makes them *a fortiori* and independently patentable over the examiner's
22 previously offered references. Claims thus effected include applicant's claims 3-
23 4, 6-7, 12, 14-15, 18, 20-21, 26-31, 33 and 35, and examiner's paragraph 6
24 §103(e) rejection of claims 3-4, 6-7, 12, 14-15, 18, 20-21, 33, and 35.

25
26 (Para. 11) These are, in short, not anticipated by Richter because claim 1
27 and 2, or claims dependent on claims 1 or 2, are, in their amended states,
28 distinct from those of Richter, as explained above.

29
30 (Para. 12) The applicants further respectfully assert that this same distinction
31 also negates grounds for examiner's paragraph 8, §103(a) obviousness rejection
32 of claims 5, 8-11, 13, 16-17, 19, 22-32, 34, and 36 as unpatentable over Richter
33 I, in view of Heger et al (US 5,956,260), Beckhart et al (US 6,526,668 B1) and
34 Franks (US 4,546,551). This is because the qualities or characteristics claimed
35 by the applicants are not, as amended, additions or modifications to the
36 previously known Richter art, whether obvious or otherwise. They are not, in
37 fact, based on the art of the Richter patent at all, but, entirely premised on the
38 new art of the instant application.

39
40 (Para. 13) Finally, applicants respectfully submit that this also negates the
41 examiner's paragraph 9 §103(a) obviousness grounds for rejection of amended
42 claims 2-4, 6-7, 12, 14, 18, 20-21, 26-31, 33, and 35. Further, it negates
43 examiner's paragraph 9 §103 rejection of claims 304, 6-7, 12, 14-15, 18, 20-21,
44 26-31, 33, and 35, and examiner's paragraph 10 §103(a) rejection of claims 5, 8-
45 11, 13, 16-17, 19, 22-25, 32, 34, and 36.

46
47 (Para. 14) Additionally, and in further response to examiner's paragraph 9,
48 proposing rejection of the above listed claims as unpatentable over Richter in

1 view of Brunson et al (US 4, 549, 277), the applicants respectfully point out that
2 Brunson always requires a plurality of sensors physically attached to a plurality of
3 surfaces and used to independently measure the independent inclinations of
4 each of those surfaces. (Compare Brunson claim 1, para. (a) and independent
5 claim 12, para. (a) to the instant application claims 1 and 2.)

6
7 (Para. 15) However, in contrast, although the instant art can incorporate a
8 plurality of sensors, it does not **require** a plurality of sensors nor does it
9 require a plurality of surfaces. Richter measures the angle, or angles, of one
10 surface or plane using one or more sensors.

11
12 (Para. 16) The above characteristic of the Brunson patent is further high-lighted
13 by the feature laid out in Brunson claim 6 paragraph (a) wherein the **difference**
14 of inclination of two remote surfaces is measured. This is explained in
15 specification column 8, lines 10-18 and 60-68 and column 9, lines 1-14, and
16 emphasized through the incorporation of a communication system between the
17 remotely located points. (See column 12, lines 33-37.)

18
19 (Para. 17) In contrast, the device of the instant art measures the angles, or angle,
20 for one surface. It is not attached to that surface, but only pressed against it, laid
21 upon it, or directed toward or by it, for long enough to take a measurement
22 preferably, by means of orientation of a rigid case wherein the sensors are
23 mounted. (See instant application claims 1, 2 and 29.)

24
25 (Para. 18) In respectful response to examiner's noted, but not referred to, US
26 patent application by HAMAR (US 2004/0083616 A1) and further discussion of it
27 in the informal telephone conference of 23 SEP 2005, with examiner the
28 applicants respectfully assert that the technology is distinctly discernable in that
29 the HAMAR art teaches only an electro-optical device, and requires electro-
30 optical components as sensor components. (I.E., it requires a light source and
31 light sensors.) The art of the instant applicants does not comprise nor require
32 these.

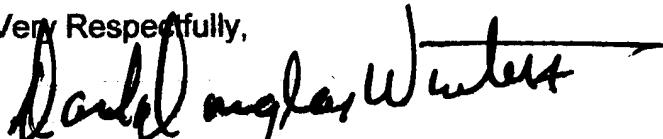
33
34 (Para. 19) Further, the HAMAR art does not teach calculation and generation
35 of a display (in this case a curved-tube bubble-level) as does the instant
36 applicant. As opposed to calculating and generating a curved-tube bubble-level
37 display where there was no curved-tube bubble-level, before, HAMAR teaches,
38 instead, a system comprising an actual curved-tube bubble-level fitted with
39 electro-optical sensors that effectively magnify and image of that bubble-level to
40 produce a higher degree of accuracy for the user, providing, concurrently, a
41 numerical read-out of the values sensed. The instant applicant's art
42 eliminates the actual bubble-level, entirely.

43
44 (Para. 20) The notable function of HAMAR is to provide increased accuracy and
45 viewing accessibility for the viewer. It is, effectively, a "super-power bubble-
46 level;" Essentially the electrical equivalent of a carpenter's bubble-level equipped
47 with a magnifying glass and angled viewing mirror, Hamar merely senses,
48 reproduces, conditions, and magnifies an image of an encased and physically

1 present, bubble level. RICHTER, in contrast converts signals from a mercury
2 sensor to generate a simulation display of a bubble level. It contains no actual
3 bubble-level.

4
5 (Para. 21) The applicants' intent is that this application now be in complete
6 compliance with all requirements for allowance and issue. If for any reason this
7 application is not believed to be in full condition for allowance, applicants
8 respectfully request the constructive assistance and suggestions of the Examiner
9 in order that the undersigned can place this application in allowable condition as
10 soon as possible and without the need for further proceedings.

11
12 Very Respectfully,

13
14 

15
16 David Douglas Winters
17 Reg.# 50,746

18
19 Encl: (1) SPECIFICATION excerpt, Marked Up
20 (2) SPECIFICATION excerpt, Clean Copy
21 (3) CLAIMS LIST, Marked Up
22 (4) CLAIMS LIST, Comprehensive
23 (5) Submission of Corrected Drawings
24 (6) USPTO Office Communication dated 06/28/2005
25 (7) Credit Card Payment Auth for 2 months response time extension ~~& Petition~~

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1 level like) display format (112), or graphic vertical (round-dome bubble-level like) display
2 format (113) [and to the sensor alarm (45)].

3 The format button (120) is used to select the display format (numeric or graphic)
4 preferred. The "ON/OFF/RESET" button (130) is used to switch the machine on and off
5 and to internally mark a particular orientation of the machine for use as a baseline/zero
6 point against which subsequent angles may be measured. The memory button (140) is
7 used to record measurements and calculations for later reference. The laser button
8 (150) is used to activate the laser reference pointer (60).

9 To exercise this embodiment, one presses the "ON/OFF/RESET" button (130)
10 and orients the measuring device by pressing the case against one surface the angle of
11 which one desires to measure. The display screen (20) will then show numeric or
12 graphic information relative to the vertical as defined by gravity. (The device will
13 automatically generate its output values according to whether it is positioned with its
14 display facing upward or with facing to one side.) At this point, one may simply observe
15 the information, or record the information by pressing the "MEMORY" button (140).

16 Additionally, one may again press the "ON/OFF/RESET" button (130) to redefine
17 the baseline/zero point to equal the present orientation. Then the device may be moved
18 to a new position and it will measure the new angle inscribed relative to the orientation
19 had at the time the "ON/OFF/RESET" button was last pushed. At this point, the output
20 values may again be observed or they may be recorded by pushing the "MEMORY"
21 button (140) for later reference.

22 If the user desires to measure an angle to a remote point, he/she may substitute
23 the laser reference pointer (60) for physical contact with the surfaces to receive angular
24 measurement. Instead of the pressing the device against the surface(s) in question,